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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.dep.wv.gov

April 22, 2016

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-10902054, issued to CNX GAS COMPANY LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

  
James Martin  
Chief

Operator's Well No: 5737  
Farm Name: LANE, INA G.  
**API Well Number: 47-10902054**  
**Permit Type: Plugging**  
Date Issued: 04/22/2016

**Promoting a healthy environment.**

**04/22/2016**

## PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

### CONDITIONS

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged under the terms of that agreement.

1) Date \_\_\_\_\_, 20\_\_\_\_\_  
2) Operator's  
Well No. 5737  
3) API Well No. 47-109-02054

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil \_\_\_\_/ Gas x/ Liquid injection \_\_\_\_/ Waste disposal \_\_\_\_/  
(If "Gas, Production x or Underground storage \_\_\_\_ ) Deep \_\_\_\_/ Shallowx

5) Location: Elevation 2766 ft. Watershed Milam Fork of Barkers Creek  
District Barkers Ridge County Wyoming Quadrangle Rhodell

6) Well Operator CNX Gas Company LLC 7) Designated Agent Anthony Kendziora  
Address 627 Claypool Hill Mall Road Address One Dominion Drive  
Cedar Bluff, VA 24609 Jane Lew, WV 26378

8) Oil and Gas Inspector to be notified Name Brian Ferguson BKF  
Address 708 Manor Drive  
Beckley, WV 25801  
9) Plugging Contractor Name L&D Well Services  
Address PO Box 1192  
Vansant, VA 24656

10) Work Order: The work order for the manner of plugging this well is as follows:  
**see attached plugging procedures**

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Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector Brian K Ferguson Date 3/25/2016

API 47-109-02054 Plugging Procedure

BKS

Well # 5737

1. Verify total depth 3970'.
2. Run free-point survey on 4-1/2" casing.
3. Run tubing to TD. Set plug of Class A 3% CaCl cement from established TD to approximately 50' below free point or a point at least 100' above the Little Lime Perforations (2999' – 3004') .
4. Cut 4-1/2" casing at free-point.
5. Cement through 4-1/2" csg. while pulling 4-1/2", from top of bottom plug to approximately 100' below the 7" casing shoe. (Approx. 894') Pull remaining 4-1/2" out of well.
6. Run bond log on 7" casing. 7" appears to be CTS.
7. Run tubing to previous cement top (894'). Cement from 894' to surface if the 7" is CTS. If not, the free 7" will be pulled before cementing to surface.
9. Install 4-1/2" X 4' steel monument with API# and Date.

NOTE: A 100' gel spacer will be placed at approximately half the well depth. Class A 3% CaCl cement will be utilized throughout the entire cementing process.

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5737

(2001)

47-109-02054

12<sup>3</sup>/<sub>4</sub>" @ 21' Sand In

7" @ 794' 190SKS

4<sup>1</sup>/<sub>2</sub>" @ 3413 120SKS

6<sup>1</sup>/<sub>2</sub> DTD @ 3970

Little line 2999' - 3004' 15 holes

Big Line 3292' - 3300' 16 holes

#5737  
47-109-02054

WR-35

DATE: 9/11/2001  
API#: 47 109 02054

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Reviewed Ar

Well Operator's Report of Well Work

Farm name: Lane, Ina G Operator Well No.: 5737

LOCATION: Elevation: 2766.47' Quadrangle: Rhodell

District: Barkers Ridge County: Wyoming  
Latitude: 8590 Feet South of 37 Deg. 32 Min. 30 Sec.  
Longitude 1035 Feet West of 81 Deg. 17 Min. 30 Sec.

Company: Dominion Exploration & Production, Inc.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
PO Box 1248, Jane Lew, WV 26378				
Agent: <u>Rodney J. Biggs</u>				
Inspector: <u>Ofie Helmick</u>				
Date Permit Issued: <u>6/01/2001</u>				
Date Well Work Commenced: <u>08/10/2001</u>	<u>12 3/4"</u>	<u>21'</u>	<u>21'</u>	<u>Sand In</u>
Date Well Work Completed: <u>08/30/2001</u>				
Verbal Plugging: <u>N/A</u>	<u>7"</u>	<u>794'</u>	<u>794'</u>	<u>190 sks</u>
Date Permission granted on: <u>N/A</u>				
Rotary X Cable Rig	<u>4 1/2"</u>	<u>3413'</u>	<u>3413'</u>	<u>120 sks</u>
Total Depth (feet): <u>3970'</u>				
Fresh Water Depth (ft.): <u>N/A</u>				
Salt Water Depth (ft.): <u>N/A</u>				
Is coal being mined in area (N/Y)? <u>N</u>				
Coal Depths (ft.): <u>N/A</u>				

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Permitting  
NOV 05 2001  
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OPEN FLOW DATA

Producing formation Big Lime Fracture Pay zone depth (ft) 3292-3300'  
2999-3004'  
Gas: Initial open flow 33 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 605 MCF/d Final open flow 0 Bbl/d  
Time of open flow between initial and final tests 12 Hours  
Static rock Pressure 530 psig (surface pressure) after 12 Hours

\* Comingled

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: \_\_\_\_\_  
By: \_\_\_\_\_  
Date: 11/1/01

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WYO 2001

COMPANY/WELL NO.: DEPI 5737

08/30/01 PLAN TO FRAC TODAY

10/30/2001

PERFORATED AND FRACED AS FOLLOWS:

BIG LIME, 3282 - 3300', 16 HOLES, PUMPED 130 BBLs TREATED WATER, 2000 GAL 28% HCL, 20 MSCFN2  
FRACTURE, 2899 - 3004', 15 HOLES, 70Q FOAM FRAC WITH 129 BBLs,  
10,000# SAND, 114 MSCFN2

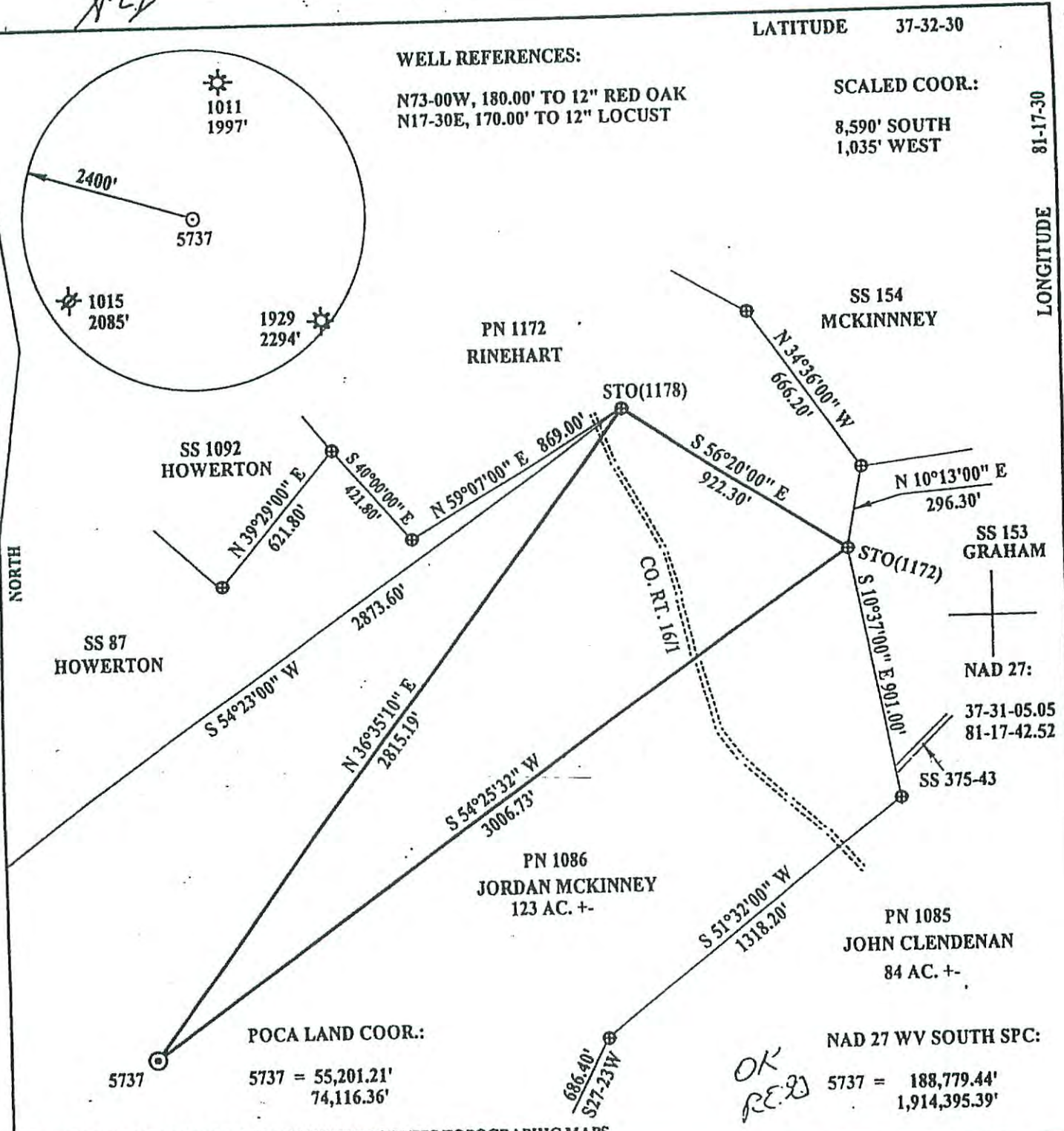
FORMATION TOPS

Ravencliff	1384	1463
Avis	1603	1646
Little Lime	2875	3240
Big Lime	3240	3910
LTD		3978'

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10902054P


ALB



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NUMBER: \_\_\_\_\_  
 DRAWING NUMBER: DEP5737.PCS  
 SCALE: 1" = 500'  
 MINIMUM DEGREE OF ACCURACY: 1 IN 2500  
 PROVEN SOURCE OF ELEVATION: DGPS SURVEY 04/05/01  
SUBMETER SYSTEM

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY.

(SIGNED)   
 STEPHEN D. LOSH, P.S. #674



STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 MCKININ ROAD  
 NITRO, WV 25143-1506

LAND SURVEYING SERVICES  
 21 CEDAR LANE, BRIDGEPORT, WV 26330  
 PHONE: 304-842-2018 OR 842-5762

DATE: APRIL 09, 2001

OPERATORS WELL NO.: 5737

API WELL NO. 47-109-02054P

STATE WYOMING COUNTY WYOMING PERMIT 79917

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 2766.47' WATERSHED MILAM FORK  
 DISTRICT BARKERS RIDGE COUNTY WYOMING  
 QUADRANGLE RHODELL LEASE NUMBER 79917

SURFACE OWNER INA G. LANE ACREAGE 51.00 (DEED 45/395)  
 OIL & GAS ROYALTY OWNER PENN VIRGINIA OIL & GAS CORP. LEASE ACREAGE 103,420

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION   
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_\_\_

TARGET FORMATION BIG LIME PLUG & ABANDON  CLEAN OUT & REPLUG   
 ESTIMATED DEPTH 3625'

WELL OPERATOR DOMINION EXPLORATION & PRODUCTION, INC. DESIGNATED AGENT RODNEY BIGGS  
 ADDRESS P. O. BOX 1248 JANE LEW, WV 26378 ADDRESS P. O. BOX 1248 JANE LEW, WV 26378

WYOMING COUNTY: WYOMING PERMIT: 2054

04/22/2016



1090257P  
Transfer fee  
CK272000037  
5000

WW-4A  
Revised 6-07

1) Date: \_\_\_\_\_  
2) Operator's Well Number \_\_\_\_\_  
5737  
3) API Well No.: 47 - 109 - 02054

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Ina G. Lane</u> ✓	Name _____
Address <u>PO Box 1</u>	Address _____
<u>Stephenson, WV 25928-0001</u>	_____
(b) Name <u>Penn Virginia Oil and Gas Corp.</u> ✓	(b) Coal Owner(s) with Declaration
Address <u>840 Gessner Suite 800</u>	Name <u>same</u>
<u>Houston TX 77024</u>	Address _____
(c) Name _____	Name _____
Address _____	Address _____
6) Inspector <u>Brian Ferguson</u> <u>EXF</u>	(c) Coal Lessee with Declaration
Address <u>708 Manor Drive</u>	Name _____
<u>Beckley, WV 25801</u>	Address _____
Telephone <u>304-550-6265</u>	_____

**TO THE PERSONS NAMED ABOVE:** You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.

Well Operator CNX Gas Company LLC  
 By: [Signature]  
 Its: Manager - Gas Permitting  
 Address 627 Claypool Hill Mall Road  
Cedar Bluff, VA 24609  
 Telephone 276-596-5137

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 WV Department of  
 Environmental Protection

Subscribed and sworn before me this 28th day of March, 2016  
[Signature] Notary Public  
 My Commission Expires 03/11/2019

COMMONWEALTH OF PENNSYLVANIA  
 NOTARIAL SEAL  
 Sara M. Micoli, Notary Public  
 Cecil Twp., Washington County  
 My Commission Expires March 11, 2019

**Oil and Gas Privacy Notice**

The Office of Oil and Gas processes your personal information, such as name, address and other information, in order to perform its regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov).

04/22/2016

109020547

WW-9  
(2/15)

API Number 47 - 109 - 02188  
Operator's Well No. 5737

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name CNX Gas Company LLC OP Code 494458046  
Watershed (HUC 10) 0507010103 Quadrangle Rhodell

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection ( UIC Permit Number 2D0550319 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain \_\_\_\_\_)

Will closed loop system be used? If so, describe: a pumper truck with a flow back tank will be used in lieu of a pit.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

-If oil based, what type? Synthetic, petroleum, etc.

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc.

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

-Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Matt Hanley*

Company Official (Typed Name) Matt Hanley

Company Official Title Manager Gas Permitting

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WV Department of Environmental Protection

Subscribed and sworn before me this 28<sup>th</sup> day of March, 20 16

*Sara M Micoli*

My commission expires 03/11/2019

COMMONWEALTH OF PENNSYLVANIA  
Notary Public NOTARIAL SEAL  
Sara M. Micoli, Notary Public  
Cecil Twp., Washington County  
My Commission Expires March 11, 2019  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

04/22/2016

CNX Gas Company LLC

Proposed Revegetation Treatment: Acres Disturbed 1.5 Prevegetation pH to be determined

Lime based on pH Tons/acre or to correct to pH 7

Fertilizer type <sup>10-20-20</sup> \_\_\_\_\_

Fertilizer amount 550 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
orchard grass	<u>25</u>		
birdsfoot trefoil	<u>15</u>		
lidino clover	<u>10</u>		

Attach:  
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Brenda Ferguson

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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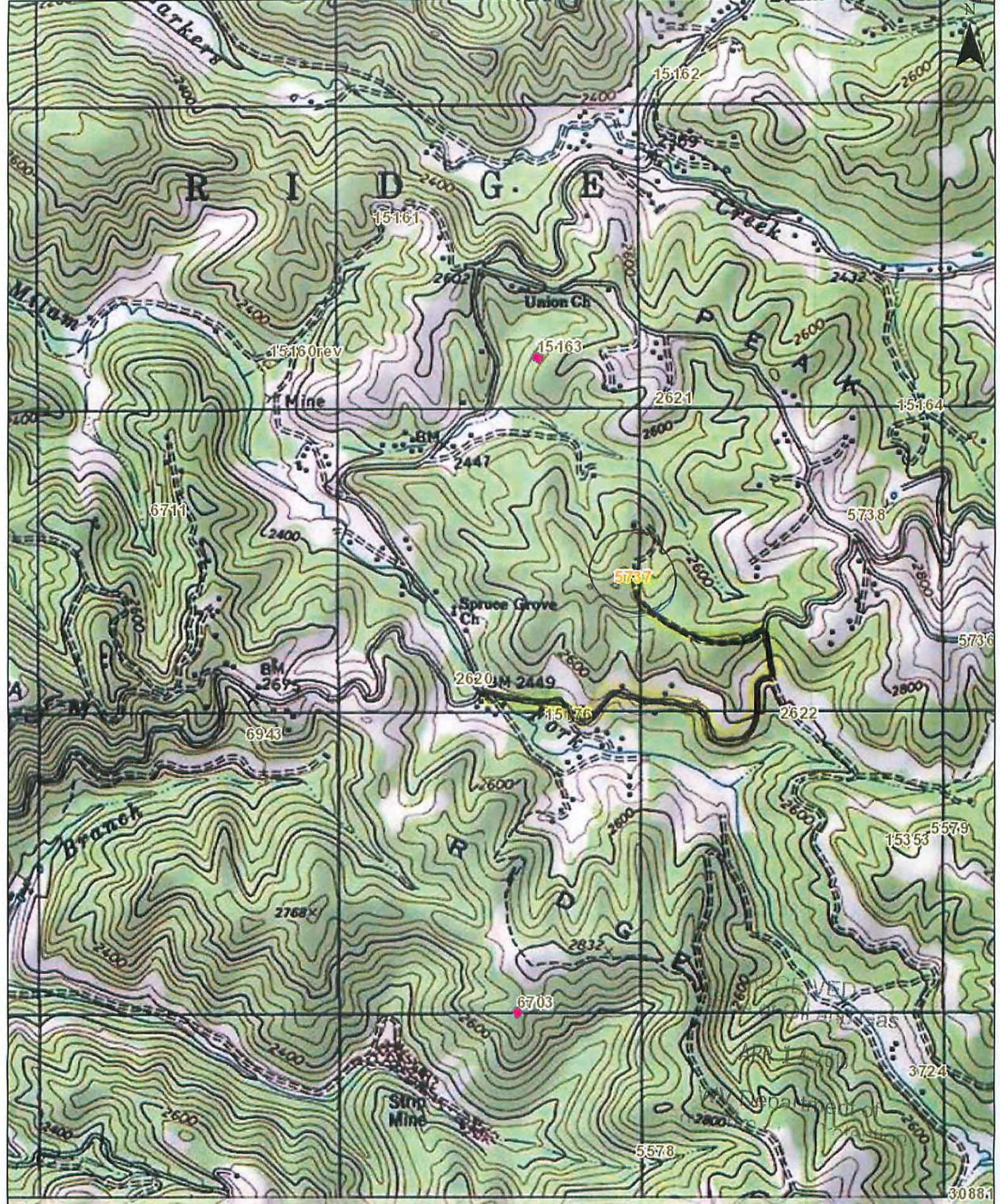
APR 14 2016

WV Department of  
Environmental Protection

Title: Oil & Gas Inspector

Date: 3/25/2016

Field Reviewed? (  ) Yes (  ) No



Legend

- Labels
- Sealed Gob Units
- CNX Access Road

0 425 850 1700 2550 Feet  
 Date: 3/1/2016 Prepared By: Web App Builder for ArcGIS

This product was generated by CONSOL Energy's WEB Map. Intended for Internal Use Only.

**EMPPOWER ENERGY**  
 General Location: 5737  
**04/22/2016**

WW-7  
8-30-06



West Virginia Department of Environmental Protection  
Office of Oil and Gas

**WELL LOCATION FORM: GPS**

API: 47-109-02054 WELL NO.: 5737

FARM NAME: Ina Lane

RESPONSIBLE PARTY NAME: - CNX Gas Company LLC

COUNTY: Wyoming DISTRICT: Barkers Ridge

QUADRANGLE: Rhodell

SURFACE OWNER: Ina Lane

ROYALTY OWNER: Penn Va Oil and Gas

UTM GPS NORTHING: 4,152,428.9 m

UTM GPS EASTING: 473,922.4 m GPS ELEVATION: 2766

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS \_\_\_\_: Post Processed Differential \_\_\_\_

Real-Time Differential \_\_\_\_

Mapping Grade GPS X: Post Processed Differential \_\_\_\_

Real-Time Differential X

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4. Letter size copy of the topography map showing the well location. I, the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

[Signature]  
Signature

Production Foreman  
Title

3/30/16  
Date